

CLAIMS

1. A heat-sensitive stencil master comprising a heat-sensitive polymeric film having a thickness of less than 10 μm and, coated thereon, a solid resinous foam comprising a foaming agent.

2. A stencil master according to claim 1, wherein the foaming agent is a surfactant having an HLB of greater than 6.

3. A stencil master according to claim 1, wherein the solid foam incorporates a fibrous material.

4. A stencil master according to claim 3, wherein the fibrous material has a diameter of greater than 1 μm and less than 10 μm , and a length in the range of 100 μm to 14 mm.

5. A stencil master according to claim 3, wherein the fibrous material has a length in the range of 100 μm to 500 μm .

6. A stencil master according to claim 3, wherein the fibrous material is selected from carbon fibres, glass fibres, and polymeric fibres such as polyester fibres and polyvinyl alcohol fibres.

7. A stencil master according to claim 6, wherein the fibrous material comprises carbon fibres.

8. A stencil master according to claim 1, wherein the solid foam comprises a thermoplastic resin.

9. A stencil master according to claim 1, wherein the solid foam comprises a cross-linked resin.

10. A stencil master according to claim 9, wherein the resin is cross-linked by irradiation.

11. A stencil master according to claim 10, wherein the resin is cross-linked by electron beam irradiation.

12. A stencil master according to claim 9, wherein the resin is a polyurethane cross-linked through unsaturated acrylate groups.

13. A stencil master according to claim 1, wherein the solid foam incorporates an antistatic agent.

14. A stencil master according to claim 1, wherein the heat-sensitive polymeric film has a release coating on the side of the film opposite the solid foam.

15. A stencil master according to claim 1, wherein the foaming agent comprises ammonium stearate, a sulphate foaming agent or a mixture thereof.

16. A method of producing prints in a digital duplicating printing process using the stencil master as defined in claim 1.

17. A stencil for use in a digital duplicating printing process comprising a stencil master as defined in claim 1, which has been thermally imaged to produce voids in the heat-sensitive polymeric film.

18. A method of producing prints in a digital duplicating printing process using the stencil as defined in claim 17.

19. A heat-sensitive stencil master comprising a heat-sensitive polymeric film and, coated thereon, a solid porous resin coating having a filler dispersed therein, wherein the filler is selected from the group consisting of carbon fibres, carbon particles and mixtures thereof.

20. A stencil master according to claim 19, wherein the filler comprises carbon fibres having a diameter of greater than 1 μm and less than 10 μm , and a length in the range of 100 μm to 14 mm.

21. A stencil master according to claim 20, wherein the carbon fibres have a length in the range of 100 μm to 500 μm .

22. A stencil master according to claim 19, wherein the solid porous coating comprises a thermoplastic resin.

23. A stencil master according to claim 19, wherein the solid porous coating comprises a cross-linked resin.

24. A stencil master according to claim 23, wherein the resin is cross-linked by electron beam irradiation.

25. A method of producing prints in a digital duplicating printing process using the stencil master as defined in claim 19.

26. A stencil for use in a digital duplicating printing process comprising a stencil master as defined in claim 19, which has been thermally imaged to produce voids in the heat-sensitive polymeric film.

27. A method of producing prints in a digital duplicating printing process using the stencil as defined in claim 26.

28. A method for manufacturing a heat-sensitive stencil comprising coating onto a heat-sensitive polymeric film having a thickness of less than 10 μm , a liquid foam comprising a resin dispersed or dissolved in a volatile liquid, and, optionally, a foaming agent, and drying the liquid foam to form a solid foam coating.

29. A method according to claim 28, wherein the volatile liquid is water.

30. A stencil master produced by the method defined in claim 28.